



**ANSI Z535.4-2011**  
Revision of  
ANSI Z535.4-2007

American National Standard  
**Product Safety Signs and Labels**

Secretariat:

**National Electrical Manufacturers Association**

Approved July 19, 2011  
Published September 15, 2011

**American National Standards Institute, Inc.**

### **DISCLAIMER**

The information in this publication was considered technically sound by the consensus of persons engaged in the development and approval of the document at the time it was developed. Consensus does not necessarily mean that there is unanimous agreement among every person participating in the development of this document.

ANSI standards and guideline publications, of which the document contained herein is one, are developed through a voluntary consensus standards development process. This process brings together volunteers and/or seeks out the views of persons who have an interest in the topic covered by this publication. While NEMA administers the process to promote fairness in the development of consensus, it does not write the document and it does not independently test, evaluate, or verify the accuracy or completeness of any information or the soundness of any judgments contained in its standards and guideline publications.

NEMA disclaims liability for any personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, application, or reliance on this document. NEMA disclaims and makes no guaranty or warranty, express or implied, as to the accuracy or completeness of any information published herein, and disclaims and makes no warranty that the information in this document will fulfill any of your particular purposes or needs. NEMA does not undertake to guarantee the performance of any individual manufacturer or seller's products or services by virtue of this standard or guide.

In publishing and making this document available, NEMA is not undertaking to render professional or other services for or on behalf of any person or entity, nor is NEMA undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances. Information and other standards on the topic covered by this publication may be available from other sources, which the user may wish to consult for additional views or information not covered by this publication.

NEMA has no power, nor does it undertake to police or enforce compliance with the contents of this document. NEMA does not certify, test, or inspect products, designs, or installations for safety or health purposes. Any certification or other statement of compliance with any health or safety-related information in this document shall not be attributable to NEMA and is solely the responsibility of the certifier or maker of the statement.

## **AMERICAN NATIONAL STANDARD**

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published by

**National Electrical Manufacturers Association  
1300 North 17th Street, Rosslyn, VA 22209**

© Copyright 2011 by National Electrical Manufacturers Association

All rights reserved including translation into other languages, reserved under the Universal Copyright Convention, the Berne Convention for the Protection of Literary and Artistic Works, and the International and Pan American Copyright Conventions.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

Printed in the United States of America

**This page intentionally left blank.**

## Contents

	Page
Foreword .....	vii
1 Introduction .....	1
2 Scope and Purpose .....	1
2.1 Scope .....	1
2.2 Purpose .....	1
2.2.1 Existing American National Standards.....	1
3 Application and exceptions .....	1
3.1 Application .....	1
3.1.1 ISO-formatted safety signs.....	1
3.2 Exceptions .....	2
4 Definitions .....	2
5 Use of signal words .....	4
5.1 Hazard classification .....	4
5.2 Signal word selection .....	4
5.3 Multiple hazard signs.....	4
6 Sign or label format.....	4
6.1 Panels.....	4
6.2 Panel arrangement.....	4
6.2.1 Panel format.....	4
6.2.2 Panel placement.....	4
6.2.3 Panel shape .....	5
6.3 Safety alert symbol.....	5
6.4 Distinctiveness .....	5
6.5 Word message .....	5
6.5.1 Multiple messages.....	5
6.5.2 Longer word messages and space limitations .....	5

ANSI Z535.4-2011

7	Safety sign and label colors .....	5
7.1	Standard colors .....	5
7.2	Signal word panels .....	5
7.2.1	DANGER .....	5
7.2.2	WARNING .....	5
7.2.3	CAUTION .....	5
7.2.4	NOTICE .....	5
7.2.5	SAFETY INSTRUCTIONS or similar words .....	5
7.2.6	Safety alert symbol .....	6
7.3	Message panel .....	6
7.4	Safety symbol panel .....	6
7.5	Border .....	6
7.6	Color options .....	6
7.6.1	Other colors .....	6
7.6.2	When special circumstances limit the use of sign colors .....	6
7.6.3	When special circumstances preclude the use of safety colors .....	6
8	Letter style and size .....	6
8.1	Letter style .....	6
8.1.1	Signal words .....	6
8.1.2	Message panel lettering .....	6
8.2	Letter size .....	6
8.2.1	Lettering .....	6
8.2.2	Determination of minimum safe viewing distance .....	7
8.2.3	Signal word letter height .....	7
9	Sign and label placement .....	7
9.1	Location .....	7
9.1.1	Safety instruction signs .....	7
9.3	Protection .....	7

10	Expected life and maintenance.....	7
10.1	Expected life.....	7
10.2	Product user instructions.....	7
10.2.1	Maintenance.....	7
10.2.2	Replacement.....	7
10.2.3	Installation procedure.....	7
11	Safety symbols.....	8
11.1	Conveyed message.....	8
12	References.....	8
12.1	General.....	8
12.2	American National Standards.....	8
12.3	Other standards.....	8

## Figures

1	The Safety Alert Symbol.....	3
2	Examples of Color Description.....	9
3	Three-Panel Sign in Vertical Format.....	10
4	Two-Panel Sign in Vertical Format.....	10
5	Three-Panel Sign in Horizontal Format.....	10
6	Two-Panel Sign in Horizontal Format.....	10
7	Two-Panel Sign in Shortened Signal Word Panel Format.....	10
8	Two-Panel Sign in Side-by-Side Format.....	11
9	Three-Panel Sign in Horizontal Format with Symbol Panel on Right.....	11
10	Three-Panel Sign in Horizontal Format with Message Panel and Symbol Panel Separated by Line.....	11
11	Three-Panel Sign in Horizontal Format with Message Panel and Symbol Panel Separated by White Space.....	11
12	Two-Panel Sign in Horizontal Format with Word Panel and Symbol Panel.....	11
13	Hazard Alerting Sign Incorporating a Safety Instruction Panel.....	12
B1	Examples of Correct Safety Alert Symbol and Sign Word Placement.....	15
B2	Examples of Incorrect Safety Alert Symbols and Signal Word Placement.....	15
B3	Word Message with Hazard Type and Consequence First.....	16
B4	Word Message with Hazard Avoidance First.....	16

ANSI Z535.4-2011

B5	Example of Headline Style Message .....	16
B6	Example of Non-headline Style Message .....	16
B7	Examples of Active Voice Sentences .....	17
B8	Examples of Passive Voice Sentences.....	17
B9	Examples of Sentences without Prepositional Phrases.....	17
B10	Examples of Sentences with Prepositional Phrases.....	17
B11	Message in Outline Format.....	18
B12	Message in Outline-with- Bullets Format .....	18
B13	Message in Continuous Format .....	18
B14	Message with Left-Aligned Ragged Text .....	18
B15	Message with Centered Text .....	18
B16	Message with Justified Text.....	18
B17	Text with Mixed Case Lettering.....	19
B18	Text with Selective Use of Upper Case Lettering .....	19
B19	Text with All Upper Case Lettering .....	19
B8	Vertical Bilingual Format .....	22
B9	Horizontal Multilingual Format with Symbol Panel in Middle .....	22
B10	Horizontal Multilingual Format with Symbol Panel on Left Side .....	22

**Tables**

B1	Examples of Word Message Letter Heights and Minimum Safe Viewing Distances.....	21
D1	Translations of Signal Words .....	<b>Error! Bookmark not defined.</b>

**Annexes**

A	Providing Information About Safety Messages in Collateral Materials and Product Safety Signs and Labels.....	13
B	Principles and Guidelines for the Design of Product Safety Signs and Labels .....	15
C	The Use of ISO Safety Signs for Products.....	25
D	Translations of Signal Words .....	26
E	Risk Estimation and Signal Word Selection.....	27
F	Informative References .....	32



## Foreword

In 1979, the ANSI Z53 Committee on Safety Colors was combined with the ANSI Z35 Committee on Safety Signs to form the ANSI Z535 Committee on Safety Signs and Colors. This committee has the following scope:

To develop standards for the design, application, and use of signs, colors, and symbols intended to identify and warn against specific hazards and for other accident prevention purposes.

While the basic mission and fundamental purpose of the ANSI Z535 Committee is to develop, refine, and promote a single, uniform graphic system used for communicating safety and accident prevention information, the Z535 Committee recognizes that this information can also be effectively communicated using other graphic systems.

The Z535 Committee created subcommittees to update the Z53 and Z35 standards and to write new standards. To date, the following six standards comprise the ANSI Z535 series:

- ANSI Z535.1 *Safety Colors* [ANSI Z53.1-1979 was updated and combined into this standard in 1991]
- ANSI Z535.2 *Environmental and Facility Safety Signs* [ANSI Z35.1-1972 and Z35.4-1972 were updated and combined into this standard in 1991]
- ANSI Z535.3 *Criteria for Safety Symbols* [new in 1991]
- ANSI Z535.4 *Product Safety Signs and Labels* [new in 1991]
- ANSI Z535.5 *Safety Tags and Barricade Tapes (for Temporary Hazards)* [ANSI Z35.2-1974 was updated and combined into this standard in 1991]
- ANSI Z535.6 *Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials* [new in 2006]

Together, these six standards contain the information needed to specify formats, colors, and symbols for safety signs used in environmental and facility applications, in product and product literature applications, and in temporary safety tag and barricade tape applications.

Published separately is the ANSI Z535 Safety Color Chart. This chart gives the user a sample of each of the safety colors: red, orange, yellow, green, blue, purple, brown, grey, white, and black. It also describes each color's ink formulation and closest PANTONE<sup>®</sup> color.

This ANSI Z535.4 standard was prepared by Subcommittee Z535.4 on Product Safety Signs and Labels. The foreword and all of the annexes are considered to be informative and are not an official part of this standard. In the vocabulary of writing standards, the word "informative" is meant to convey that the information presented is for informational purposes only and is not considered to be mandatory in nature. The body of this standard is "normative," meaning that this information is considered to be mandatory.

This standard provides guidelines for the design of safety signs and labels for application to products. The core guidelines contained in this standard were initially published in the first edition of this standard. This first edition became available in 1992. In the 1998 revision, Annex A was added to explain the use of safety label components in collateral material used with the product, and Annex B was added to provide helpful principles and guidelines for the design of product safety signs.

In the 2002 revision, Annex C was added to describe the use of ISO formats for product safety signs and labels and Annex D was added to provide translations for signal words.

In the 2007 revision, Annex E was added to provide assistance in selecting a signal word and Annex F was created to separate the normative references from the informative references.

The 2011 edition of this standard was revised to better harmonize with the ANSI Z535.2, Z535.5, and Z535.6 standards. A new type of product safety sign, the "safety instruction sign", was added to the standard joining the existing types of signs, hazard alerting signs, and safety notice signs which were also more clearly defined and named in this edition. In tandem with these changes, the definitions for

ANSI Z535.4-2011

“accident,” “harm,” and “incident” were refined to more clearly delineate a separation between physical injury and other safety-related issues (e.g., property damage).

Due to differences in color printing technologies and color monitors, the appearance of colors in this standard may not be accurate. See the ANSI Z535-2011 Safety Color Chart for the purpose of viewing accurate colors.

Proposals for improvement of this standard are welcome. Information concerning submittal of proposals to the Z535 Committee for consideration can be found at the back of this standard.

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee Z535 on Safety Signs and Colors. Committee approval of this standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the Z535 Committee had the following members:

**Gary M. Bell, Chair**

Richard Olesen, Vice Chair

Greg Winchester, Secretary

<i>Organization Represented:</i>	<i>Name of Representative:</i>
American Society of Safety Engineers	J. Paul Frantz Thomas F. Bresnahan (Alt.) Howard A. Elwell (Alt.)
American Welding Society	August F. Manz
Applied Materials	Edward Karl Carl Wong (Alt.)
Applied Safety and Ergonomics, Inc.	Steven Hall Stephen Young (Alt.)
Association for Manufacturing Technology	David Felinski
Association of Equipment Manufacturers	Richard A. Dressler Daniel Taylor (Alt.)
Browning Arms Company	Larry D. Nelson
Caterpillar, Inc.	Charles Crowell Mark Steffen (Alt.)
Clarion Safety Systems, LLC	Geoffrey Peckham
Dorris and Associates International, LLC	Nathan T. Dorris Alan Dorris (Alt.) Kelly Burke (Alt.)
Eagle Crusher Co.	Ryan Parsell
Edison Electric Institute	David Young

Hale Color Consultants, Inc.	William N. Hale
Human Factors and Ergonomics Society	Michael Kalsher Michael S. Wogalter (Alt.)
Human Factors and Safety Analytics, Inc.	B. Jay Martin
International Safety Equipment Association	Janice Comer Bradley Christine Fargo (Alt.)
Institute of Electrical and Electronics Engineers	Sue Vogel
International Staple, Nail, and Tool Association	John W. Kurtz
L. Dale Baker & Associates	L. Dale Baker
Lab Safety Supply, Inc.	Jim Versweyveld
Law Office of Mathew Kunding	Mathew Kunding
Marhefka & Associates	Russell E. Marhefka
National Association of Graphic and Product Identification Manufacturers	Russ Butchko Donna Ehrmann (Alt.)
National Electrical Manufacturers Association	John Katzbeck
National Spray Equipment Manufacturers Association	Angela Redlund-Spieker
P&G Duracell, Inc.	Linda Moquet Steven Wicelinski (Alt.)
Power Tool Institute	Brett Cohen Mark Hickok (Alt.) Charles M. Stockinger (Alt.)
Rockwell Automation	Steven Chybowski
Rural Utilities Service	Trung Hiu
Safety and Forensic Enterprises, LLC	Loren Mills
Safety Behavior Analysis, Inc.	Shelley Waters Deppa
Sauder Woodworking Company	Gary Bell
Scaffold Industry Association	Dave Merrifield

ANSI Z535.4-2011

Snap-On-Tools	Dan Eggert
Standard Register Corporation	Amy Martin Linda LeBlanc (Alt.)
System Safety Society	Robert J. Cunitz
Travelers Insurance Company	Karen Stetler
Underwriters Laboratories	Richard Olesen
Whirlpool Corporation	Deborah Sherman Donald Grob (Alt.)
World Kitchen, LLC	Celeste Levindoski

At the time it prepared this edition of ANSI Z535.4 for Z535 Committee vote, Subcommittee Z535.4 on Product Safety Signs and Labels had the following members:

**Steve Hall, Chair**  
Paul Orr, Secretary

Lewis Barbe	World Safety Organization
Gary Bell	Sauder Woodworking Company
Thomas F. Bresnahan	American Society of Safety Engineers
Steven Chybowski	Rockwell Automation
Robert J. Cunitz	System Safety Society
Shelley Deppa	Safety Behavior Analysis, Inc.
Alan Dorris	Dorris and Associates International, LLC
Nathan T. Dorris	Dorris and Associates International, LLC
Donna Ehrmann	National Association of Graphic and Product Identification Manufacturers
William N. Hale	Hale Color Consultants, Inc.
James Heckman	Standard Register Corporation
Wayne Hill	Power Tool Institute
Judith J. Isaacson	Applied Safety and Ergonomics
John Katzbeck	National Electrical Manufacturers Association
Russell Marhefka	Marhefka & Associates
B. Jay Martin	Human Factors and Safety Analytics, Inc.
Dave Merrifield	Scaffold Industry Association
Loren Mills	Safety and Forensic Enterprises, LLC
Linda Moquet	P&G Duracell, Inc.
Richard Olesen	Underwriters Laboratories
Geoffrey Peckham	Clarion Safety Systems, LLC
Deborah Sherman	Whirlpool Corporation
Karen Stetler	Travelers Insurance Company
Michael Weber	Association of Equipment Manufacturers
Carl Wong	Applied Materials

---

**AMERICAN NATIONAL STANDARD**

---

**ANSI Z535.4-2011****Product Safety Signs and Labels****1 Introduction**

This standard sets forth a system for presenting safety and accident prevention information through product safety signs and labels. It consolidates a number of previous graphic approaches into a common design direction selected to present product hazard information in an orderly and visually consistent manner.

The basic mission and fundamental purpose of the ANSI Z535 Committee is to develop, refine, and promote a single, uniform graphic system used for presenting safety and accident prevention information. Such an approach assists standard users in the efficient development of product safety signs and labels, and assists sign viewers in recognizing signs as being related to safety.

This standard sets forth a hazard communication system that is designed to complement the ANSI Z535.2-2011, ANSI Z535.5-2011, and ANSI Z535.6-2011 standards. While these standards are similar in many respects, they each address different physical and visual requirements. As a result, the Accredited Standards Committee Z535 has recognized and affirmed the need for these separate standards.

**2 Scope and Purpose****2.1 Scope**

This standard sets forth requirements for the design, application, use, and placement of safety signs and labels on a wide variety of products.

**2.2 Purpose**

The purposes of this standard are to:

- a. establish a uniform and consistent visual layout for safety signs and labels applied to a wide variety of products,
- b. minimize the proliferation of designs for product safety signs and labels, and
- c. establish a national uniform system for signs that communicate safety information.

**2.2.1 Existing American National Standards**

There are a number of existing American National Standards that are recognized for particular industries or specific uses. Compliance with such a standard may be considered for the particular industry or use. It is not the intent of this ANSI Z535.4 standard to replace existing standards or regulations that are uniquely applicable to a specific industry or use. It is the intent to encourage adoption of this standard in subsequent revisions of other standards and regulations.

**3 Application and exceptions****3.1 Application**

This standard provides guidance for manufacturers, employers, distributors, and others who have a desire to communicate safety information via product safety signs or labels.

**3.1.1 ISO-formatted safety signs**

Product safety information may be conveyed by ISO formatted safety labels in compliance with ISO 3864-2 (see Annex C).